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NELSON GOODMAN'S TWO THEORIES OF MEANING

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In his essay 'On likeness of meaning' Nelson Goodman has proposed that "two terms have the same meaning if and only if they have the same primary and secondary extensions".[1] In this context, the *primary extension* of a predicate is simply its normal extension, i.e., the set of things to which it applies. Thus a predicate will normally have just one primary extension. But it will typically have many secondary extensions. For a *secondary extension* of a predicate is explained as the primary extension of any of its compounds. Thus, for example, the predicate 'unicorn' has the set of unicorns (i.e., the empty set) as its primary extension. Its secondary extensions, on the other hand, are the primary extensions of such compound predicates as 'picture of a unicorn', 'description of a unicorn' and 'unicorn steak'. Thus, the set of unicorn-pictures, the set of unicorn-descriptions and the set of unicorn steaks (the empty set) are included among the secondary extensions of 'unicorn'.

Goodman claims of his theory that it will allow us to account for differences of meaning between coextensive predicates without reference to compound predicates "that apply to anything but physical things, classes of these, classes of classes of these, etc." (p. 5). Accordingly, he explicitly rules out of consideration such devices for compounding predicates as 'thought of...', 'concept of...' and 'attribute of...'. But, even with this restriction on permissible compounds, Goodman argues that his theory accounts for the difference in meaning between such coextensive predicates as 'unicorn' and 'centaur'. The reasoning is that 'unicorn' has at least one secondary extension that is not also a secondary extension of centaur. He argues, invalidly we shall see, that because there are pictures of unicorns that are not pictures of centaurs, the set of unicorn-pictures is a secondary extension of 'unicorn' but not a secondary extension of 'centaur'.

In a later essay, defending his theory against its many critics, Goodman restates his proposal:

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> ...two terms are synonymous if and only if (a) they apply to exactly the same objects, and (b) each compound term constructed by combining certain words with either of the terms in question applies to exactly the same objects as the compound term constructed by combining the same words in the same way with the other of the terms in question.[2]

Notice that this is really a *different* proposal. The first proposal talks simply of primary and secondary extensions of predicates and allows for interlinguistic comparisons of meaning. Accordingly, we can intelligibly inquire whether the German predicate 'Einhorn' and the English predicate 'unicorn' have the same meaning (i.e., whether they have the same primary and secondary extensions). But the second proposal offers a substitutional criterion for synonymy and permits only intralinguistic meaning comparisons. Since 'Einhorn' and 'unicorn' do not in general occur in parallel constructions, we cannot intelligibly inquire, in terms of the second theory, whether they have the same meaning.

I can find no evidence, either in the writings of Goodman or elsewhere in the literature, of any awareness that two theories have been proposed rather than one.[3] Because of its wider applicability, it might be supposed that the earlier theory is to be preferred to the later theory. But this would be a mistake. For the earlier theory is subject to a fatal objection from which the later theory escapes. The objection is that, according to the earlier theory, any two coextensive (English) predicates have the same meaning. This will come as a surprise to those familiar with Goodman's two essays. For Goodman argues that according to his theory no two predicates have the same meaning.

Before arguing the general objection, I would like to consider one of its instances. Earlier I claimed that Goodman would have us mistakenly infer from the fact that some pictures of unicorns are not pictures of centaurs that the set of unicorn-pictures is a secondary extension of 'unicorn' but not a secondary extension of 'centaur'. To see that this is indeed a mistake, consider the predicate 'is either a centaur or a picture of a unicorn'. It is a compound of the predicate 'centaur'. (It is also a compound of 'unicorn', but this doesn't matter.) And it applies to all and only pictures of unicorns. Thus its primary extension is the set of unicorn-pictures. It follows that the set of unicorn-pictures is, contrary to Goodman, a secondary extension of 'centaur'. The argument of this example can easily be generalized to show that any two predicates having an empty extension have the same secondary extensions and thus, according to Goodman's first proposal, have the same meaning. For let

P and Q be any two predicates having an empty extension. And let α be any secondary extension of Q. Then, there is some compound of Q, say, R that has α as its primary extension. Consider the compound predicate ⌜is either P or R⌝. It is a compound of P and has α as its primary extension. Thus α is a secondary extension of P. Similarly, any secondary extension of P is a secondary extension of Q. It follows that P and Q have the same primary and secondary extensions and that they have, according to Goodman's first proposal, the same meaning.

But more than this was promised. The objection was that, according to the first proposal, any two (English) predicates with the same extension, whether null or not, have the same secondary extensions. The more general claim can be established as follows. Let P and Q be any two coextensive English predicates. And let α be any secondary extension of Q. Then there is some compound R of Q that has α as its primary extension. But consider the compoint predicate ⌜is either both P and not-Q or R⌝. It is a compound of P. It has, as is easily verified, α as its primary extension. Thus α is a secondary extension of P. Similarly any secondary extension of P is a secondary extension of Q. Therefore,P and Q have the same primary and secondary extensions and have, according to Goodman's first proposal, the same meaning.

Since Goodman's first theory has the virtue of allowing interlinguistic meaning comparisons, it would be desirable to find some way of salvaging it from the above criticism. A natural suggestion is to find some non ad hoc way of ruling predicates like ⌜is either P and not-Q or R⌝ out of consideration. Indeed, Goodman himself makes a similar suggestion in a different context.

> The reader may still feel that the compounds cited in deriving the conclusion that every two terms differ in meaning are somehow exceptional and trivial, and that a feasible way of ruling them out must eventually be found. This feeling I can understand; when a single form of compound has a different extension for every term, the fact that it has different extensions for two given terms is of no striking or special interest. Let us, then, simply exclude every compound for which the corresponding compounds of every two terms have differing extensions.[4]

Unfortunately, the gruesome predicate ⌜is either P and not-Q or R⌝ is not ruled out by this criterion. For, if S and T have the same primary extension, then so also do the parallel compounds ⌜is either S and not-Q or R⌝ and ⌜T and not-Q or R⌝.

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NOTES

[1] Analysis 10 (1949), p. 5. A revised version of this essay is reprinted in Goodman's: Problems and Projects (Bobbs-Merrill, Indianapolis, 1972; new edition, Hackett, Indianapolis,), pp. 221–230. The comments that follow should be understood as restricted to Goodman's theory insofar as it applies to one-place predicates. After the third paragraph only English predicates are under consideration.

[2] 'On some differences about meaning', Analysis 13 (1953), p. 90. This essay is reprinted in: Problems and Projects, pp. 231–238.

[3] In: Languages of Art (Hackett, Indianapolis, 1976), Goodman formulates his theory in still different language: "The *primary* extension of a character consists of what that character denotes; a *secondary* extension consists of what some compound of that character denotes. Two characters differ in meaning if they differ in primary extension or in any of their parallel secondary extensions" (205n). This appears to be a conflation of the two proposals. The reference to primary and secondary extensions suggests that he has the first proposal in mind. But the reference to 'parallel secondary extensions' suggests that he has the later proposal in mind.

[4] 'On some differences about meaning', p. 95. Also, see Goodman's 'Reply to Eberle', Erkenntnis 12 (1978), p. 156.